



# EH- EL53A/B INCREMENTAL ENCODER



## Incremental encoder

Encoder series to be mounted directly on motors. Our integrated elastic coupling allows radial and axial slack compensation

- Resolution up to 10.000 ppr with zero for EL series, up to 1024 ppr for EH series.
- Different output types available.
- Up to 28 Vdc input voltage for EL series and up to 24 Vdc for EH series.
- Up to 300 kHz frequency response for EL series and up to 100 kHz for EH series
- Output cable with connector
- Several flanges available
- Up to 6.000 rpm speed rotation



hollow shaft INCREMENTAL ENCODERS

EH-EL53A/B

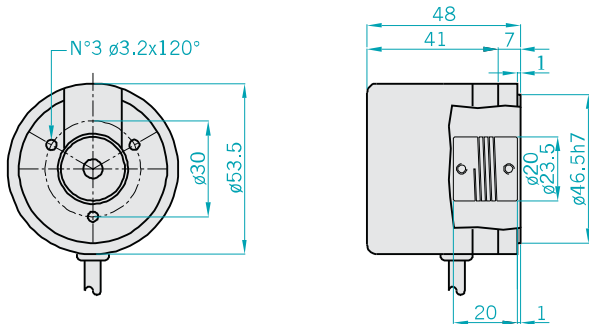
## Ordering code

Full stop to separate special versions.

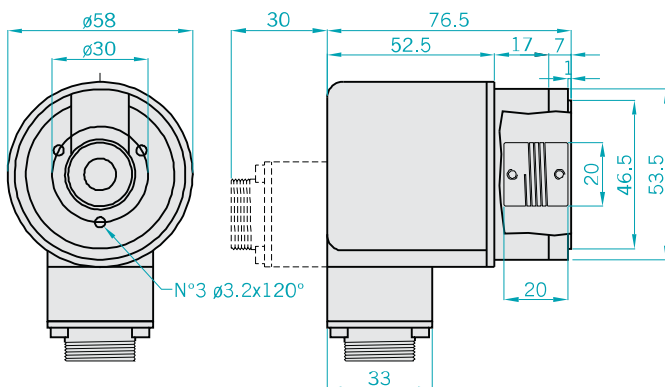
**EL 53 A 1000 Z 5/28 N 6 X 6 M R . XXX**

<p>Incremental encoder series <b>EL</b></p> <p>Incremental encoder series <b>EH</b></p> <p>Body dimension <b>53</b></p> <p>mod.EH-EL53A <b>A</b></p> <p>mod.EH-EL53B <b>B</b></p> <p><b>Resolutions</b></p> <p>from <b>1</b> to <b>10000</b> PPR series EL</p> <p>from <b>40</b> to <b>1024</b> PPR series EH</p> <p><i>Please, directly contact our offices for pulses availability</i></p> <p><b>Zero pulse</b></p> <p>without zero pulse <b>S</b></p> <p>with zero pulse <b>Z</b></p> <p><b>Input voltage</b></p> <p>input voltage series EL <b>5 ÷ 28</b></p> <p>input voltage series EH <b>5 / 8 ÷ 24</b></p> <p><i>LINE DRIVER available only with input voltage 5 Vdc 8 ÷ 24 Vdc</i></p>	<p><b>R</b> radial</p> <p><b>A</b> axial(only EL 53)</p> <p><b>P</b> cable output (standard length 1,5 m series EL)</p> <p>cable output (standard length 0,5 m series EH)</p> <p><b>M</b> connector MS3106E 16S-1S or 18-1S only EL53</p> <p><b>J</b> connector JMSP 1607 or 1610 only EL53</p> <p><b>R.P.M.</b></p> <p><b>3</b> 3000</p> <p><b>6</b> 6000</p> <p><b>Enclosure rating</b></p> <p><b>X</b> standard IP54 EH53</p> <p>standard IP64 EL53</p> <p><b>Bore diameter</b></p> <p><b>6</b> ø 6 H7 mm</p> <p><b>8</b> ø 8 H7 mm</p> <p><b>10</b> ø 10 H7 mm</p> <p><b>Output types</b></p> <p><b>N</b> NPN</p> <p><b>C</b> NPN OPEN COLLECTOR</p> <p><b>P</b> PUSH PULL</p> <p><b>L</b> LINE DRIVER</p> <p><i>For options about output types please refer to incremental outputs section</i></p>	<p>Special version code numbered from 001 to 999</p>
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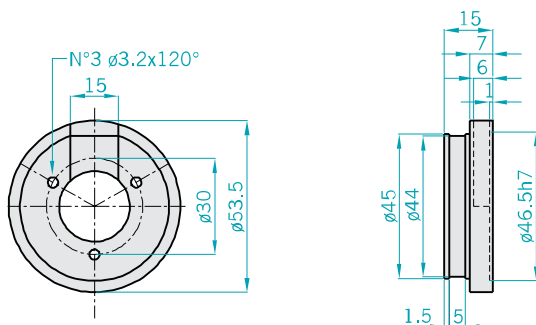
## EH53 A



## EL 53 A



## Flange version EH-EL53B



### EL series electrical specifications

<b>Resolution</b>	from 1 to 10000 PPR
<b>Input voltage</b>	5 ÷ 28 Vdc LINE DRIVER only available with input voltage 5/8 ÷ 24 Vdc
<b>Input current with no output load</b>	100 mA MAX
<b>Source and sink current</b>	50 mA for channel 20 mA for channel with LINE DRIVER
<b>Output types</b>	NPN / NPNOPEN COLLECTOR/ PUSH PULL / LINE DRIVER
<b>Frequency response</b>	100 KHz MAX $F = \frac{RPM \times Resolution}{60}$

### EL series electrical specifications

<b>Resolution</b>	from 40 a 1024 PPR
<b>Input voltage</b>	5Vdc / 8 ÷ 24 Vdc
<b>Input current with no output load</b>	100 mA Max
<b>Source and sink current</b>	50 mA for channel 20 mA for channel with LINE DRIVER
<b>Output types</b>	NPN / NPNOPEN COLLECTOR/ PUSH PULL / LINE DRIVER
<b>Frequency response</b>	100 KHz Max $F = \frac{RPM \times Resolution}{60}$

### Mechanical specifications

<b>Bore diameter</b>	$\phi 6 / 8 / 10$ mm h7
<b>Enclosure rating</b>	EH53 : IP54 standard EL53 : IP64 standard
<b>Shaft speed</b>	3000 RPM 6000 RPM
<b>Shock</b>	50 G for 11 msec (with plastic disc) 20 G for 11 msec (with glass disc)
<b>Vibrations</b>	10G 10 ÷ 2000 Hz
<b>Bearings life</b>	$10^9$ revolu-
<b>Bearings</b>	n° 2 ball bearings
<b>Shaft material</b>	Stainless steel AISI303
<b>Body material</b>	Aluminium D11S - UNI 900/5
<b>Housing material</b>	PA 66 reinforced with fiber glass
<b>Operating temperature</b>	$0^\circ \div +60^\circ C$
<b>Storage temperature</b>	$-25^\circ \div +70^\circ C$
<b>Weight</b>	EH53 : 150 g EL53 : 350 g